

MARINE SAFETY MANUAL

- 3.E.5 a. (cont'd) of Amendments to the International Convention for the Safety of Life at Sea (SOLAS), 1974 was effective on 1 September 1984. These amendments contain the latest requirements for steering gear systems (Regulations 29 and 30). Corresponding Coast Guard regulations are found in 46 CFR 58.25 (machinery) and 33 CFR 164.39 (U.S. and foreign tanker requirements).
- b. Regulatory Developments. Regulation projects have been completed to incorporate not only the steering gear sections, but also all of the SOLAS amendments into Titles 33 and 46, CFR. Most of the electrical requirements for steering gear systems have already been updated in Subchapter F. Major improvements to the steering gear systems include the steering control systems, indicating and alarm systems, and the regaining of some steering capability after a single failure. Steering gear hydraulic systems are vital fluid power and control systems. As such, the requirements of 46 CFR 56 as modified by subpart 58.30 are applicable. Portions of the systems exceeding a MAWP of 225 psig are Class I piping systems. Particular attention should also be given to mechanical connections. These are required to be only of sound and reliable construction, in many cases they represent single failure points in the steering gear system. For more on inspection of steering gear, see Volume II of this manual.
- F. Vital System Automation (46 CFR 62).
1. Introduction. In 1975, the Intergovernmental Maritime Consultative Organization (IMCO) [now International Maritime Organization (IMO)] adopted Resolution A.325 (IX), "Recommendations Concerning Regulations for Machinery and Electrical Installations in Passenger and Cargo Ships." This resolution addressed, among other things, periodically unattended machinery spaces; it recommended that governments apply as soon as possible regulations set out in the resolution, in conjunction with the applicable requirements of SOLAS 74, which entered into force on 25 May 1980. 46 CFR Part 62 addresses, in part, the condition of periodically unattended machinery spaces and incorporates the principles contained in "Automated Main and Auxiliary Machinery; Supplemental Guidance On", COMDTPUB P16700.4, NVIC 6-84 and Enclosure (1) of "Automated Main and Auxiliary Machinery", COMDTPUB P16700.4, NVIC 1-69. Often, Part 62 is incorrectly presumed to apply only to machinery or electrical installations that reduce vessel manning requirements; it applies to all automatically or remotely monitored or controlled systems or equipment.
 2. NVIC's 1-69, 1-78, and 6-84. "Automated Main and Auxiliary Machinery; Supplemental Guidance On", COMDTPUB P16700.4, NVIC 1-69, and "Automated Main and Auxiliary Machinery", COMDTPUB P16700.4, NVIC 6-84, are effectively superseded by 46 CFR 62. Similarly, "Automation of Offshore Supply Vessels of 100 Gross Tons and Over", COMDTPUB P16700.4, NVIC 1-78 is superseded by 46 CFR 130. It is expected that these NVICs will be reviewed in the future, any still pertinent info will be transferred to this chapter of the Marine Safety Manual, and they will be cancelled.
 3. Automatic Auxiliary Boilers (46 CFR 63).
 - a. General. 46 CFR 63 contains regulations for control systems for automatic auxiliary heating equipment, steam boilers, water heaters, fluid heaters, and electric storage tank water heaters. This part was